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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,349	12/11/2001	Gennaidy Poberezhskiy	ST0027USU	1645

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THE ECLIPSE GROUP  
10453 RAINTREE LANE  
NORTHRIDGE, CA 91326

EXAMINER
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RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/020,349

Applicant(s)

POBEREZHSKIY ET AL.

Examiner

Melur Ramakrishnaiah

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3-6-2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Serfaty et al. (US PAT: 6,081,702, hereinafter Serfaty) in view of Krasner (US PAT: 6,064,336).

Regarding claim 1, Serfaty discloses an apparatus for estimating frequency errors in locally generated clock signal for receivers, comprising: a local oscillator (9, fig. 1) for generating a clock signal and a sampling clock, a sampling block (reads on 8, fig. 1) coupled to the local oscillator, for receiving a reference signal and the sampling clock and for generating reference sample signals, and a local oscillator frequency error estimator (10, fig. 1), for generating an error estimate between the reference signal and local oscillator sampling clock ( figs. 1-2, col. 1, line 66 – col. 3, line 22).

Regarding claim 5, Serfaty discloses a method of calibrating a local oscillator in a mobile receiver, comprising: receiving a reference signal from a source (2, fig. 1) providing the reference signal, sampling the reference signal and the clock signal from the local oscillator (9, fig. 1) and providing a second reference signal, and estimating the error in the local oscillator using the second reference signal ( figs. 1-2, col. 1, line 66 – col. 3, line 22).

Art Unit: 2614

Serfaty differs from claims 1, 5 in that he does not explicitly disclose GPS receiver for processing signals.

However, Krasner discloses GPS receiver utilizing a communication link which teaches the following: GPS receiver for processing signals (fig. 6A, col. 12, line 46 – col. 13, line 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Serfaty's system to provide for the following: GPS receiver for processing signals as this arrangement would provide means to receive and process GPS signals as thought by Krasner.

Regarding claim 2, Serfaty further teaches the following: error estimate approximates a frequency difference between the reference signal and the clock signal (col. 2 lines 29-37).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serfaty in view of Krasner as applied to claim 1 above, and further in view of Jasper (US PAT: 4,701,934).

Regarding claim 3, the combination does not teach the following: sampling block comprises a block selected from a dedicated analog-to-digital converter and integrated (IC) input pin.

However, Jasper discloses method of Doppler searching in a digital GPS receiver which teaches the following: sampling block comprises a block selected from a dedicated analog-to-digital converter (fig. 1, col. 6 lines 7-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: sampling block comprises a block selected from a dedicated analog-to-digital converter and integrated (IC) input pin as this arrangement would provide one of the methods of sampling, among many possible methods, the signal as taught by Jasper

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serfaty in view of Krasner and Jasper as applied to claim 3 above, and further in view of Chalmers et al. (US PAT: 5,272,446, hereinafter Chalmers).

Regarding claim 4, the combination does not teach the following: oscillator frequency estimator is selected from a group comprising a discrete fourier transform, a frequency detector, and a phase detector.

However, Chalmers discloses digitally implemented fast frequency estimator/demodulator which teaches the following: frequency detector (reads on frequency estimator) using discrete Fourier transform (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: oscillator frequency estimator is selected from a group comprising a discrete Fourier transform, a frequency detector, and a phase detector as this arrangement would provide well known means of estimating frequency as thought by Chalmers.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serfaty in view of Krasner as applied to claim 5 above, and further in view of Evans et al. (US PAT: 6,240,556, hereinafter Evans).

Art Unit: 2614

Regarding claim 6, the combination does not teach the following: sampling and estimating are performed by software instructions to a microprocessor.

However, Evans discloses subscriber frequency control system which teaches the following: sampling and estimating are performed by software instructions to a microprocessor (see abstract and col. 4 lines 50-57).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: sampling and estimating are performed by software instructions to a microprocessor as this arrangement would provide another well known method of implementing frequency error estimation as taught by Evans.

### ***Response to Arguments***

Applicant's arguments filed on 8-21-2006 have been fully considered but they are not persuasive.

Rejection of claims 1-2, 5 under 35 U.S.C 103(a) as being obvious over Serfaty et al. (US PAT: 6,081,702, hereinafter Serfaty) in view of Krasner (US PAT: 6,064,336): Regarding rejection of the above claims, applicant argues that Krasner '336 is not properly combinable in a manner that would arrive at the invention claimed in either of the independent claims 1 and 5. Applicant further goes into details as to how Krasner '336 process the GPS signals etc. Regarding this, it should be pointed that Krasner '336 is used as a secondary reference because primary reference Serfaty which teaches applicant's limitations of claims 1 and 5 except he does not teach a GPS receiver in place of a mobile receiver to implement the signal processing required.

Art Unit: 2614

Therefore, one of ordinary skill in the art would be motivated to apply teachings of Serfaty in GPS receiver as it would enable to apply those methods in GPS receiver for processing signals such as error correction of local oscillator frequency etc. as set forth in the office action. In addition, Applicant is arguing against the individual references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Referring to Serfaty, Applicant argues "Serfaty teaches the front end of a wireless communication receiver or transceiver, i.e. a cellular telephone without any GPS processing functionality. Element (8) in fig. 1 of Serfaty, which the examiner contends is a "sampling block", is merely a convention mixer utilized to remove the carrier signal receiver at the antenna (7)". Regarding this, Element (8) in fig. 1 of Serfaty not only does what applicant says above, it further also provides processed signal to an error estimator (10, fig. 1, col. 1, line 66 – col. 3, line 22) thereby functioning as a signal sampler.

In light of the above explanation, rejection of claims 1-6 under 35 U.S.C 103(a) is maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2614

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Melur Ramakrishnaiah  
Primary Examiner  
Art Unit 2614